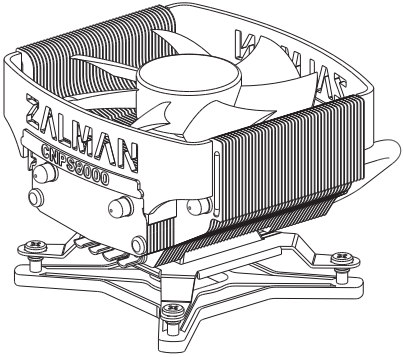
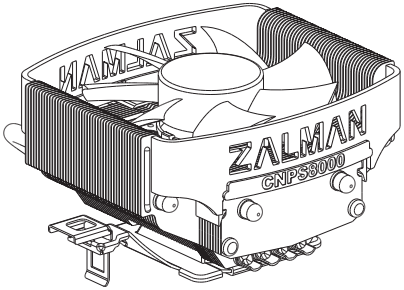
User's Manual

(English version)

ZALMAN

CNPS 8000





* Applies to all versions of CNPS8000 LED.

* Please read this manual thoroughly before installation.

http://www.zalman.co.kr http://www.zalmanusa.com

1. Features

1) Noiseless and vibration-free operation in Silent Mode.
2) Optimum performance and quick heat dispersion achieved with the use of 4 heatpipes.
3) Optimized fin design for lightness and higher performance.
4) Ultra quiet 92mm fan.
5) Compatible with Slim and Low Profile Computer Enclosures.
6) Compatible with Intel Pentium D (Socket 775), Intel Pentium 4 (Socket 775), AMD Athlon 64 X2 (Socket 939), and AMD Sempron/AMD64 (Socket 754/939/940).
7) FAN MATE 2 included for manual adjustment of fan speed.

2. Specifications

1) Cooler (CNPS8000)

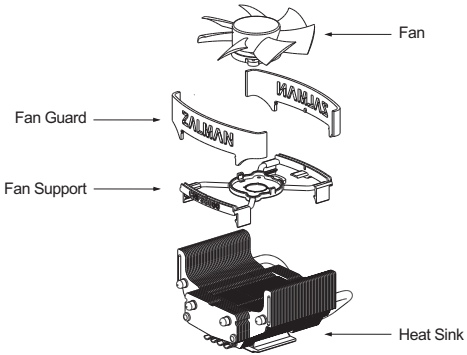
Spec. \ Model	CNPS8000
Materials	Pure copper and pure aluminum
Weight	350g
Thermal Resistance	0.13 ~ 0.20℃/W
Dimensions	108(L) X 108(W) X 62.5(H)mm
Dissipation Area	2,815㎠
Bearing Type	2-Ball Bearing
Fan Speed	1,400rpm ± 10% ~ 2,600rpm ± 10%(1)
Noise Level	18.0dBA ± 10% ~ 30.0dBA ± 10%(2)
Input Voltage	12V

2) FAN MATE 2
- Output Voltage : 5V ~ 11V ± 2 %
- Power Consumption : 6W or lower

(Note 1) The fan operates at 2,800rpm if connected directly to the motherboard's fan connector without the use of FAN MATE 2.

(Note 2) Noise measured 1m away from the source.

3. Exploded View

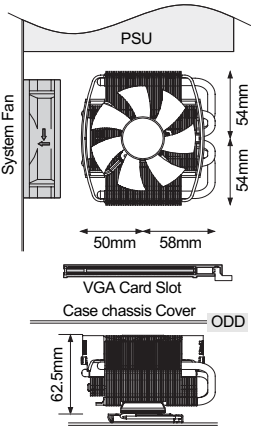


4. Patents

- ❖ Korean Patent Application No. 2005-117680
- ❖ Korean Design Application No. 2005-37714
- ❖ Patent Applications pending in over 10 nations around the world including the United States, Europe, China, and Taiwan.

5. Precautions

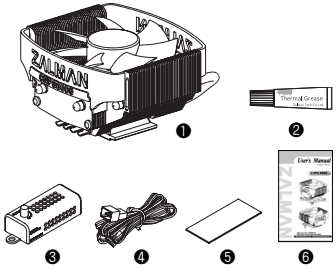
1) Keep and store the product away from the reach of children.
2) Check the components list and condition of the product before installation. If there is any problem, contact the shop of purchase to get a replacement or refund.
3) If excessive force is exerted on the fan, it may result in malfunction or damage to the product and/or system.
4) Zalman Tech Co., Ltd. is not responsible for any damages due to external causes, including but not limited to, improper use, problems with electrical power, accident, neglect, alteration, repair, improper installation, and improper testing.
5) CPU and motherboard are subject to damage if the product is incorrectly installed. Familiarize yourself with the "Installation" steps before installing the CNPS8000.
6) See the picture on the right for product dimensions to check whether the product interferes with any motherboard components.
6) Avoid inserting objects or fingers into the fan while it is in operation.



6. Components

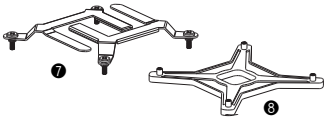
1) Common Components

- ❶ One CNPS8000
- ❷ One Thermal Grease
- ❸ One FAN MATE 2 (Fan Speed Controller)
- ❹ One Cable for FAN MATE 2
- ❺ One Double-sided Tape
  (for attaching FAN MATE 2)
- ❻ One User's Manual



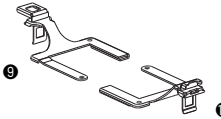
2) Components for Intel Pentium D/Pentium 4 (Socket 775)

- ❼ Two Clips for Socket 775
- ❽ One Backplate for Socket 775



3) Components for AMD AMD64 (Socket 754/939/940)

- ❾ One Clip-A for AMD64
- ❿ One Clip-B for AMD64



7. Compatible CPUs

1) All Intel Socket 775 CPUs

- Pentium D
- Pentium 4
- Celeron D

2) All AMD Socket 754/939/940 CPUs

- Opteron
- Athlon 64 X2
- Athlon 64 FX
- Athlon 64
- Sempron

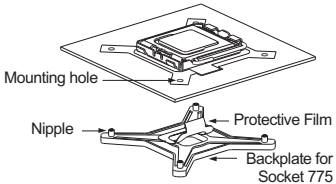
※ Air Guide equipped cases recommended for CPUs with high TDP.
※ Zalman's Super Thermal Grease recommended for better thermal performance.

8. Installation

1) Intel Pentium D / Pentium 4 - Socket 775

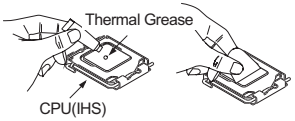
① Backplate Installation

Remove the protective film of theBackplate for Socket 775, and attach the backplate after aligning it with the holes from the backside of motherboard.



② Thermal Grease Application

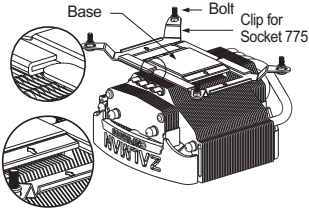
Clear off any particles and residue from the top of the CPU then spread the enclosed Thermal Grease generously on the surface of the CPU that makes contact with the base of CNPS8000.



③ Clip Installation

Inter rock the pair of Clips for socket 775 by sliding them into each other between the heatsink's base and fin.

Caution) The arrowhead marking on each clip must be in line with the arrowhead markings on the heatsink's base.

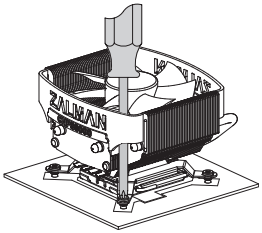


④ Cooler Installation

Place the CNPS8000 on the center of the CPU. Slightly screw the four bolts onto the backplate's nipples, then tighten each bolt one rotation at a time until all are completely tightened.

Note 1) Excessive force can result in damage to the nipples.

Note 2) Exerting excessive force on the fan with the driver can result in malfunction.



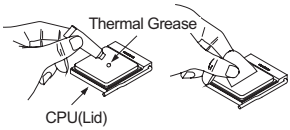
⑤ Power Connection (FAN MATE2 Installation)

❖ Please refer to FAN MATE 2 Installation and Usage on page 5.

2) AMD Sempron / AMD64 - Socket 754/939/940

① Thermal Grease Application

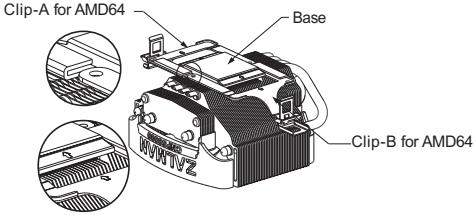
Clear off any particles and residue from the top of the CPU then spread the enclosed Thermal Grease thinly on the surface of the CPU that makes contact with the base of CNPS8000.



② Clip Installation

Inter rock the pair of Clips for AMD 64 by sliding them into each other between the heatsink's base and fin.

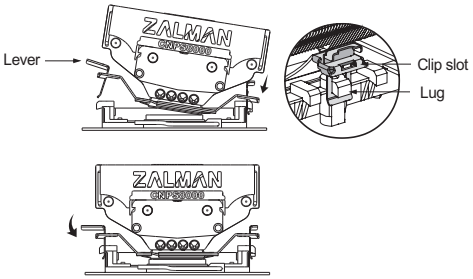
Caution) The arrowhead marking on each clip must be in line with the arrowhead markings on the heatsink's base.



③ Cooler Installation

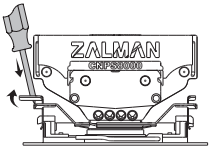
Hook the hole of Clip-B onto the retention frame's lug. Then hook the hole of Clip-A onto the retention frame's lug by pressing down on the lever of the Clip-A.

Note) Set the direction of the Clips in a manner so that there is no interference with other components of the motherboard.



*** Uninstalling the Cooler**

To uninstall the CNPS8000, press onto the clip slot with the use of a (−) driver, then push off the lever to disconnect the clip hole from the retention frame's lug.

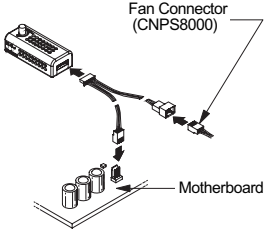


④ Power Connection (FAN MATE2 Installation)

❖ Please refer to FAN MATE 2 Installation and Usage on page 5.

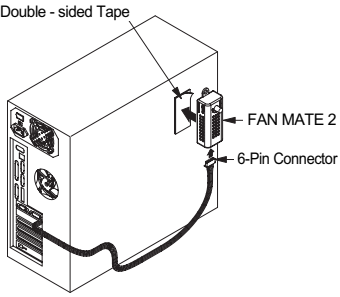
9. FAN MATE 2 Installation and Usage

1) Installing FAN MATE 2 on the Inside of the System



Connect the appropriate 3-pin connector on the cable to the motherboard fan header and the CNPS8000's fan connector.

2) Installing FAN MATE 2 on the Outside of the System



Pull the 6-pin connector out of the system through the back and connect it to FAN MATE 2, which should be installed on the case using the included double-sided tape (⑤).

◆ When the speed control knob on FAN MATE 2 is turned fully counter-clockwise, the fan operates in Silent Mode. Turned fully clockwise, it operates in Normal Mode. You can select the desired fan speed by turning the knob.

Note) FAN MATE 2 has been specifically designed for the fan of this product.
Zalman Tech Co., Ltd. is not responsible for any damage to systems or CPUs caused by using it with other types of fans.

10. Notes on Usage

1) Checking CPU Compatibility

Please refer to "Compatible CPUs" on page 3 to confirm that your CPU is compatible before using the CNPS8000.

2) Cautions During Booting

The computer system may automatically shut down when booting the computer after the system monitoring program outputs a warning stating that the CPU fan is rotating slowly. In such a case, fully turn the speed control knob in the clockwise direction before booting to disable the 'CPU Fan Detected' option in BIOS setting, or set the CPU fan's rotational speed to less than or equal to 1300rpm in the system monitoring program.

Note) Some motherboards fail to boot if the rotational speed of the CPU fan is below a certain rpm.
However, booting can be possible even at low fan rpm if the BIOS settings are updated.
For more information on updating your BIOS, please refer to the website of your motherboard manufacturer.
There are motherboards which fail to detect the rpm while operating the cooler on Silent Mode, but this does not affect computing performance.

3) OVERCLOCKING

Zalman Tech Co., Ltd. is not responsible for any damages in CPU resulting from OVERCLOCKING.

11. Zalman Computer Noise Prevention System

The use of Zalman's Noiseless Power Supply, CPU Cooler, Case Fan, Fanless Northbridge Cooler, and Video Card Cooler will allow you to achieve stable performance and maintain a noiseless environment.

Noiseless Power Supply

Fanless Northbridge Cooler

Heatpipe HDD Cooler

Noiseless Case Fan

Quiet VGA Cooler

Fan Controller

12. TNN (Totally No Noise) Computer Enclosures

TNN 300

TNN 500AF

TNN Computer Enclosures are the world's first environment-friendly noiseless computer enclosures that operate without the use of a fan. TNN Computer Enclosures use the aluminum enclosure itself as a heatsink. They are ideal for environments that require silence, as well as for home theatre systems and multi-media systems.

13. Home Theatre PC Enclosures

HD160

The HD160 is designed for ultra quiet home theatre PC operation, utilizing optimized ventilation and anti-vibration reinforcements, making it ideal for environments that require silence such as living rooms, bedrooms, educational facilities, and offices.

For more information, please visit our website.

Disposal of Old Electrical & Electronic Equipment
(Applicable in the European Union and other European countries with separate collection systems)